HERITAGE, CULTURE AND IDENTITY

World Heritage in Iran

Perspectives on Pasargadae

ALI MOZAFFARI, Australia-Asia-Pacific Institute (AAPI), Curtin University, Australia

Series Editor: **BRIAN GRAHAM**
School of Environmental Sciences, University of Ulster, UK

This edited volume presents for the first time a broad, multi-disciplinary examination of Pasargadae by experts from both outside and within Iran. It specifically focuses on those disciplines that are absent from existing studies, such as ethnography, tourism and museum studies providing valuable insights into this fascinating place. In its totality, the book argues that to understand World Heritage sites and their problems fully, a holistic approach should be adopted, which considers the manifold of perspectives and issues. It also puts forward a novel approach to the question of heritage, representation and construction of collective identity from the framework of place.

World Heritage designation may hinder further transformations of locality, but Pasargadae resists one-dimensional interpretations nonetheless. Chapters in this volume acknowledge disciplinary co-creations of place, while creatively presenting a palimpsest of meanings through unique and timely debates. This is a fascinating example of a multidisciplinary approach to the construction of heritage value that resists predictable forms of analyses.

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This volume represents an important addition to the available literature on Pasargadae. Ali Mozaffari and his co-authors explore the numerous ways in which the 'afterlife' of one of Iran's most memorable sites still calls for detailed, on-going investigation. The tension that exists between the needs of the monuments and the needs of modern local communities is but one of many topics that receives deserved notice.

David Stronach, Emeritus Professor, University of California, Berkeley, USA

The collection of articles brought together by Ali Mozaffari provides a thorough and multi-layered study of Pasargadae as a World Heritage site. This book on the city of Cyrus the Great not only does justice to its proper historical and archaeological place in history, but is also a great contribution to our understanding of the relationship between the site, the environment and the people who live there.

Touraj Daryaee, University of California, Irvine, USA

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Contents

List of Figures and Tables vii
Notes on Contributors xi
Acknowledgements xv

1 Conceptualising a World Heritage Site 1
Ali Mozaffari

2 Archaeological Approaches and their Future Directions in Pasargadae 29
Rémy Boucharlat

3 The Current State of Heritage Management at Pasargadae: Problems and Prospects 61
Mohammad-Hassan Talebian

4 Archaeology and Useful Knowledge: Pasargadae and the Rationalities of Digging 'Real' Places 91
William M. Taylor

5 The Costs of Paradise: Temporalisations of Place in Pasargadae 115
Riccardo Baldissone

6 Pasargadae, *Mâdar Soleimân* and Leilâ: Placing Pasargadae within its Present Rural Context 139
Soheila Shahshahani

7 Perspectives and Prospects for Cultural Tourism in the Pasargadae Region 155
Tod Jones and Mohammad-Hassan Talebian

8 The Past in the Present: Using Poetics as an Interpretative Strategy at Pasargadae 173
Jennifer Harris

9 The (Unfinished) Museum at Pasargadae 197
Ali Mozaffari and Nigel Westbrook

10 Antinomies of Development: Heritage, Media and the Sivand Dam Controversy 225
Elham Shamoradi, Ebrahim Abdollahzadeh
Translated by Ali Mozaffari

Index 255

List of Figures and Tables

Figures

1.1 General topography of Pasargadae core zone 5
1.2 Remains of water courses (right) and Palace P in the background. *Takht-i Solaiman* fortress is seen on the far centre 6
1.3 The tomb of Cyrus in 2004 7
1.4 The tomb of Cyrus the Great prepared for the Celebrations 12
1.5 New developments underway with modern material (above) and the older structures within the village (below) 17
1.6 Place as the network 20

2.1 Depictions of the tomb of Cyrus by Flandin and Coste in 1843 31
2.2 Herzfeld's 1928 plan of Pasargadae 33
2.3 Map of Pasargadae region produced by Aurel Stein (1936) 36
2.4 Reconstruction drawing of Pasargadae gardens by Stronach 39
2.5 Left: *Zendan-i Solaiman* as recorded by Dieulafoy in 1881; Right: the structure in 2002 41
2.6 Aerial view of the Royal Gardens with Palace P in the background 42
2.7 Plan of Pasargadae monuments by Stronach in 1961–63 44
2.8 The plan of the buildings in Pasargadae, as known from the British excavations in the 1960s and from the geomagnetic survey in the 2000s 45
2.9 Detail of electromagnetic survey of the site in 2002 showing stone building with buttresses behind the *Zendan* as revealed by the geomagnetic and electrical maps. This building is linked to a rectangular enclosure to the south 46
2.10 The trapezoid pool with sluices gates at the two ends for regulating the water flow. A large canal continues to the west along Palace S, then turns right as a narrow channel. Top of the map shows a part of the channels of the 'fourfold garden' 47
2.11 The ashlar masonry water device 20km north of Pasargadae set on the top of a dam/dike (visible on the right photo top). This sophisticated dam and another one nearby aimed at regulating the water flow of the *Polvar* River 52
2.12 Side view and exploded axonometric of water control device in Shahidabad 52
2.13 Detail of the water canals in ashlar masonry, as perfectly cut and joined as its contemporary Royal architecture in Pasargadae 53

Mozaffari, Ali. 2012. 'The Problem of a Site Museum for Pasargadae World Heritage Site (Iran)'. *International Journal of the Inclusive Museum* 4 (1): pp. 41–56.
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Chapter 2
Archaeological Approaches and their Future Directions in Pasargadae

Rémy Boucharlat

Introduction

Located on the main road between Isfahan and Shiraz, Pasargadae could not have been missed by the Eastern and later Western travellers. However, the entirely new city founded by Cyrus, the first king of the Achaemenid dynasty (559–330 BCE) was long forgotten until it was definitively recognised at the very end of the nineteenth century after decades of disputes. Since then, the site of Pasargadae was studied; its visible monuments were recorded and finally excavated in the middle of the twentieth century. In the past decade, new programs were launched to enhance its understanding, preservation and visitor experience. Concurrently, the dossier for its registration on the World Heritage list was prepared, which was accepted by UNESCO in 2004. This was an impetus for managers and scholars, who were aware that much further collaborative work remained, to give Pasargadae the prominent place it deserves within Iran and beyond. This chapter focuses on the evolution of our understanding of Pasargadae through archaeological approaches since its association with Cyrus the Great was established at the end of the nineteenth century. It demonstrates that our understanding of the original function of this place, although still speculative, has been subjected to radical change. In conclusion, the chapter suggests further archaeological endeavours, some utilising digital technologies, that could further current hypotheses about this enigmatic place.

Identifying the City of Cyrus and His Tomb: From the Nineteenth Century to Mid-twentieth Century

After Cyrus, the king's residence was soon abandoned when Darius decided to build his own palace at Persepolis some 40 kilometres away. However Pasargadae remained a significant royal place for the Achaemenid dynasty, probably because the tomb of the founder of the empire was there. After Alexander extinguished the Achaemenids, Pasargadae lost its significance and became an unimportant town for two or three centuries, and then it was abandoned. The place was partly reoccupied for a short while in the early medieval period. It had fallen into oblivion

when the tomb was transformed into a mosque before the fourteenth century CE, and then was known as '*Mashhad-i Madar-i Solaiman*' (*Farsnamah*, Le Strange and Nicholson 1921, p. 70):[1]

> The tomb of the Mother of King Solomon is of stone, in the form of a cube. No one can look into the chamber within the tomb for, as it is said, a talisman has been laid on it, whereby anyone who shall give a look into it forthwith becomes blind.

That was the name of the monument as reported by Western travellers from the earliest ones such as Josafat Barbaro (1973, pp. 149–50) in 1474–78 until the twentieth century. Many authors disputed the location of Pasargadae, preferring the town of Fasa some 150 kilometres to the southeast of Shiraz, because the modern name Fasa sounded close to Pasa, the first part of the name of Cyrus' capital (as this occurs in classical sources). However, as early as 1808–9, James Morier (1812, pp. 144–7), struck by the resemblance of the tomb to descriptions of the Classical authors Strabo and Arrian, mentioned a tomb fashioned in the form of a house. Morier put forward strong arguments favouring *Madar-i Solaiman* to be Pasargadae although he himself finally rejected this hypothesis. However the following travellers, from Sir Robert Ker Porter (1821, p. 507) ten years later, were convinced it was Cyrus's tomb and made drawings of the visible monuments. After visiting Pasargadae in 1890 George Nathaniel Curzon, the British Statesman, traveller and author convincingly demonstrated that the scattered ruins in the plain of *Morghab* (*Dasht-i Morghab*), the closest village, were those of Cyrus' capital (Curzon 1892 II, pp. 71–90).

The visible monuments, and above all Cyrus' tomb have been drawn by several travellers, all of whom considered the monument to be the tomb of Cyrus (Figure 2.1). Among them are the Beaux-Arts trained architect, archaeologist, and historian Félix Marie Charles Texier in 1840, followed a year later by painter Jean-Baptiste Eugène Napoléon Flandin and architect Xavier Pascal Coste (1843–54 IV, Pl. 194–6), albeit with occasional mistakes. Amongst the other surviving buildings, the isolated column of what is now called Palace S, the inscription of the antae of that Palace and Palace P and the bas-relief of Gate R, the masonry of the huge

1 It is likely that the original meaning of the site had fallen into oblivion long before the tomb's transformation into a mosque. It is difficult to determine with any certitude when the memory of Pasargadae did fade as, to my knowledge, we don't have written testimonies between the Classical Greek historians and the thirteenth and fourteenth centuries CE when the tomb is called *Madar-i Solaiman* a name also given to an unknown monument in Istakhr (approximately 70 kilometres southwest of Pasargadae by road), another one near Shiraz and sometimes to Persepolis itself! Now, the 'Farsnamah', which describes the historical geography of the Fars region, south of Iran, is ascribed to Ibn al-Balkhi (1110 CE) and used by Mustawfi in compiling 'Nuzhat al-Qulub' in the early fourteenth century. But we do not know if Mustawfi accurately and thoroughly copied all the information within 'Farsnameh'.

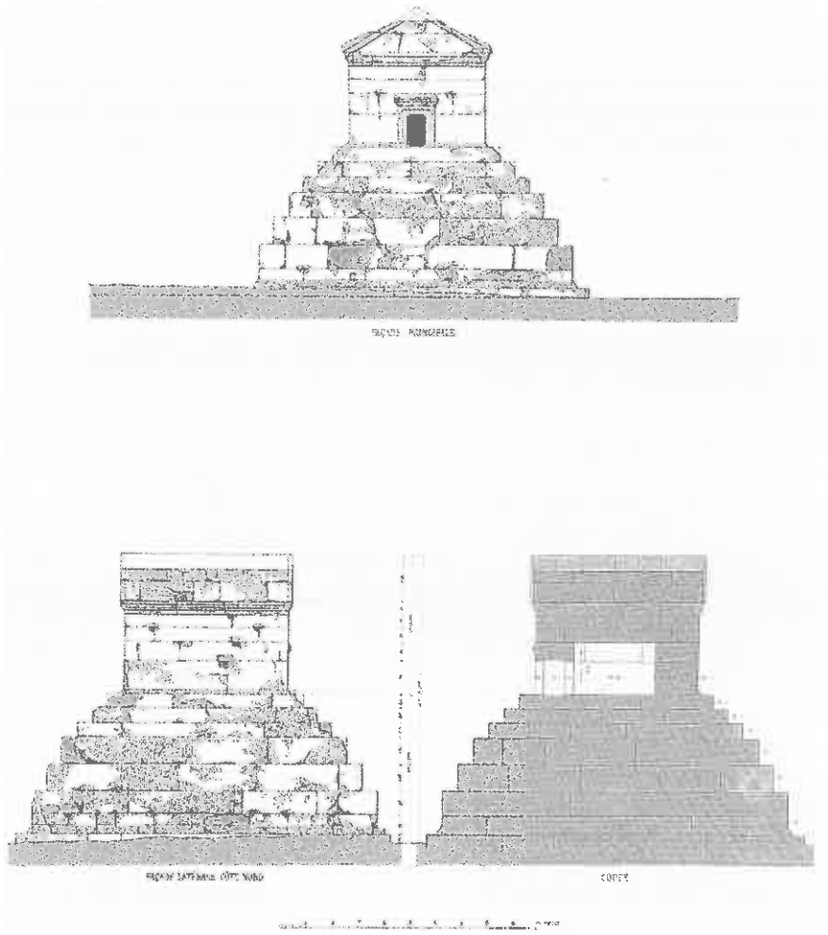


Figure 2.1 Depictions of the tomb of Cyrus by Flandin and Coste in 1843

Source: Flandin Coste 1843–54: Pl. 195 cf. Stronach 1978: Pl. 19a

stone platform, called *Tall-i Takht-i Solaiman* ('the Throne Hill of Solomon') were carefully illustrated by Flandin and Coste. These nineteenth-century drawings are of primary importance for observing the preservation of the monuments and sometimes the damage they suffered. As an example Ker Porter, then Flandin and Coste reproduced the whole doorjamb of the Gate R with Cyrus' inscription preserved above the bas-relief and 30 years later, when Friedrich Stolze took the first photographs in 1874, the inscription had disappeared (Stolze and Andreas

1882, Pl. 126–37). Marcel-Auguste Dieulafoy provided a less-accurate illustration of monuments in 1881, followed by Curzon in 1890. Contrasting with Persepolis and its densely built palaces and columned halls, Pasargadae was seen as a rather romantic site, where probably many buildings were still buried. There was little speculation that there may have been a city at Pasargadae. For these travellers, however, there was no doubt about the identity of Pasargadae. For the first time Flandin and Coste carefully surveyed the site and the ancient road linking the two capitals, Persepolis and Pasargadae, which at the time went through the narrow valley immediately south of Pasargadae, called *Tang-i Bolaghi* and remained almost unexplored until 150 years later.

Archaeology and the Discovery of Settlement Periods in Pasargadae and its Surroundings

The Achaemenid period is certainly the main, but not the first, period of human settlement in Pasargadae. The prehistoric period – between fifth and fourth millennium BCE – has been revealed by Aurel Stein's test-pits (discussed later) in 1933 to the South of the site, then, a short-term British operation at *Tall-i Nokhodi* near the tomb of Cyrus in 1961–62 revealed another small settlement of the late fourth-early third millennium BCE. In 2005–6, the joint Iran-German team working in *Tang-i Bolaghi* within the frame of a salvage excavation project unearthed settlements and several kilns dating back to the fifth millennium BCE (Helwing and Seyedin 2010).[2] After this prehistoric period there was no human occupation until the Achaemenid period. It is now established that Cyrus created Pasargadae *ex nihilo* in a deserted region.

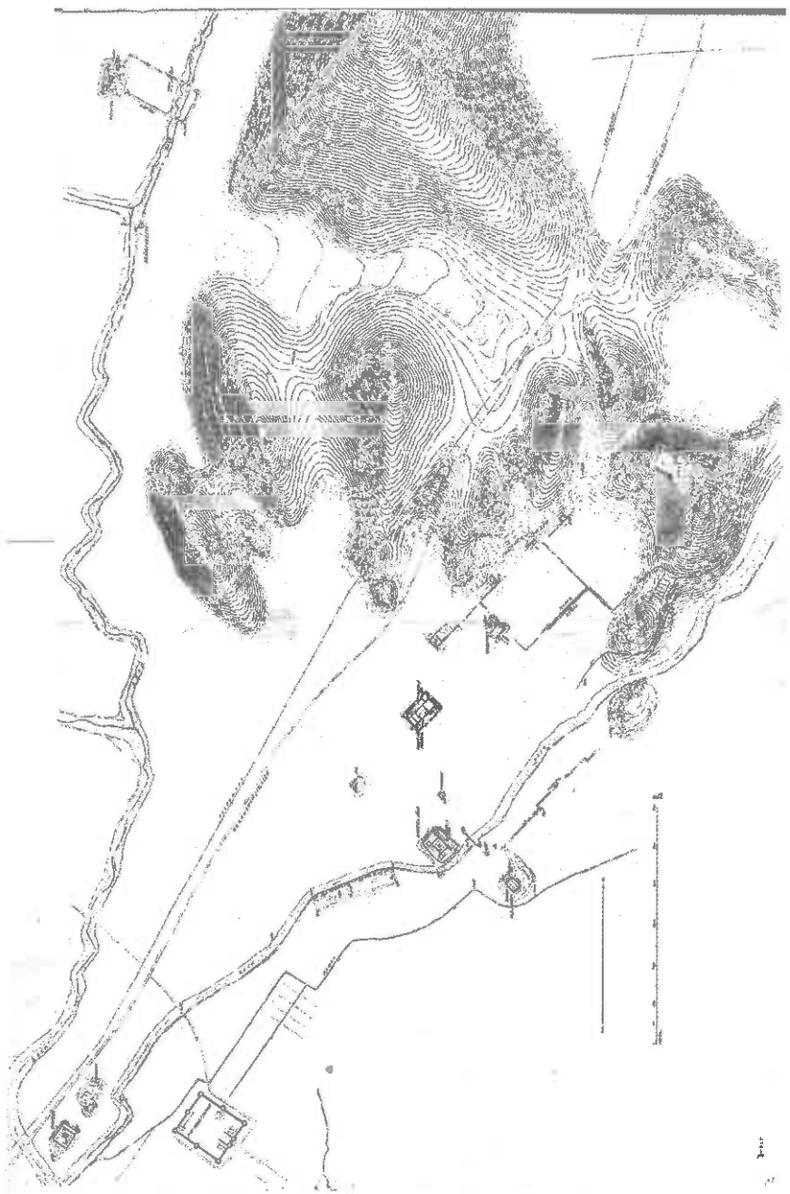
This seems to corroborate Strabo's (XV.3.8) assertion, that Pasargadae was the place where Cyrus' army defeated the Median army of his grandfather Astyages in 553 BCE, and was established as a tribute to that victory. The only textual information about the city and its occupation is from the Greek companions of Alexander when the conqueror came to the Cyrus' tomb to honour the revered founder of the Persian dynasty in 330 BCE. Those texts mention a Treasury, which indicates that Pasargadae was a real city and not merely a ceremonial site. In the Persepolis Archives (Fortification Tablets of Darius' period), a series of clay labels mention the delivery of goods for the cult of Cyrus in Pasargadae and for other religious ceremonies.[3]

2 The salvage excavation project was initiated by the Parsa-Pasargadae Research Foundation's Pasargadae Base in response to the construction of the Sivand Dam (discussed in the present volume by Abdollahzadeh and Shamoradi). The Iran-Japan team found older material in two rock caves; these flint tools date from the pre-Neolithic period (Tsuneki, Zeidi 2008, pp. 96–8) 9th–8th millennium BC.

3 In 1933, the University of Chicago's Oriental Institute archaeologists found an 'archive' of clay tablets in the fortification walls of the Persepolis Terrace. Those tablets, numbering in the tens of thousands, were transferred to the Oriental Institute in 1936 and

Figure 2.2 Herzfeld's 1928 plan of Pasargadae

Source: Herzfeld 1929–30. Plan foldout



Excavations in the early-1960s by the British archaeologist David Stronach, showed that Pasargadae remained a small city for a while (between the late-fourth and second century BCE). Then *Tall-i Takht* only was reoccupied in the early Islamic period as evidenced by new mudbrick constructions (Stronach 1978, pp. 157–9).

The site was later unoccupied as confirmed by the Western travellers until the late-nineteenth century. There was only a small village, the present day *Mobarakabad* to the northwest, and the nearest city, *Morghab*, was to the north. When Ernst Herzfeld, (discussed below), drew his plan in 1928 (Figure 2.2), settlements within Pasargadae (*Madar-i Solaiman*) and its surroundings comprised fortified villages (*qal'eh*): a dozen adobe houses arranged in a square plan and protected by high walls.

First In-depth Study of Pasargadae: Herzfeld (1905–28)

In 1908, Herzfeld, a gifted German architect, archaeologist and epigraphist,[4] definitively proved through archaeological evidence what Curzon (1892 II, pp. 68–94) had convincingly argued through textual references: that Pasargadae was Cyrus' capital. He published his observations and hypotheses as his PhD (Herzfeld 1908) and was eager to excavate the visible remains standing in an apparently uncultivated land except around the small fortified village, *Madar-i Solaiman*. However, until 1928 the French 'Délégation' had a monopoly on excavations on the whole territory of Persia (granted in 1897), which precluded him from excavations. His excellent relationship with Iranian elite and authorities allowed him to become the first foreigner to dig in Iran after the abolition of the French monopoly in 1928 (followed by the immediate establishment of the Iranian Archaeological Service directed by the French architect A. Godard). In the same year, Herzfeld began his work. He excavated the two palaces and the Gate by a series of trenches, from which he later attempted to reconstruct the complete original plans. Unfortunately, his report of his 28 days of fieldwork is rather short: 12 poorly illustrated pages (Herzfeld 1929–30). It was only 40 years later that his rich archives kept in the Smithsonian Institution in Washington D.C. began to be carefully studied with great benefit by various scholars. Herzfeld paid attention to the architectural remains and made numerous sketches of sculptures and painted fragments, which remained unpublished until the 1970s. With the help of the gifted architect Friedrich Krefter, he reconstructed the plan of the site and the monuments with some interpretations of his own, and surveyed the surroundings,

have since been studied and catalogued as an on-going project. Further information may be found on a dedicated websites: http://oi.uchicago.edu/research/projects/pfa/ and http://ochre.lib.uchicago.edu/PFA_Online/.

4 See a bibliography of Herzfeld in Encyclopaedia Iranica online, available at http://www.iranica.com/articles/herzfeld. For more details on his life, thoughts and achievements, see Gunter, Hauser 2005.

extending the plan to the neighbouring hills to the north and west, locating any ancient remains he was able to see. This plan, it should be stressed, remained unsurpassed until the end of the twentieth century despite the later valuable fieldworks. It is a valuable historical document that records the state of the natural environment before the extension of the village *Madar-i Solaiman* which was at the time a small fortified village (*qal'eh*), and the transformation of the landscape by modern agriculture.

> His excavations as a whole were conducted with passion, flair, uncommon knowledge, and, in the main, a profound respect for the testimony of the spade. Sometimes evidence was misunderstood and sometimes claims were made which should not have been made. At the last, however, we should be hugely grateful that the site was first investigated by a deeply engaged scholar of prodigal talents, who also had the foresight to enlist the services of the talented Friedrich Krefter. (Stronach 2005, pp. 121–2)

Situating the Site within a Broader Context

A few years after Herzfeld, in 1933 Sir Aurel Stein came to Pasargadae during his pioneering archaeological survey of Fars. First interested in the Prehistoric periods, he focussed his fieldwork on one of the two small mounds southeast of the Achaemenid remains, named *Do-Tulan*. He discovered a fourth-third millennium BCE settlement, but nothing later until the Achaemenid period (Stein 1936, pp. 217–21) suggesting a considerable gap in the occupation of Pasargadae between the third millennium BCE and the emergence of the Achaemenids; an important point that was later confirmed by the British test-pits on another Prehistoric mound west of Cyrus' tomb. Therefore, one can assume Cyrus created Pasargadae upon a plain, which was uninhabited for two millennia.

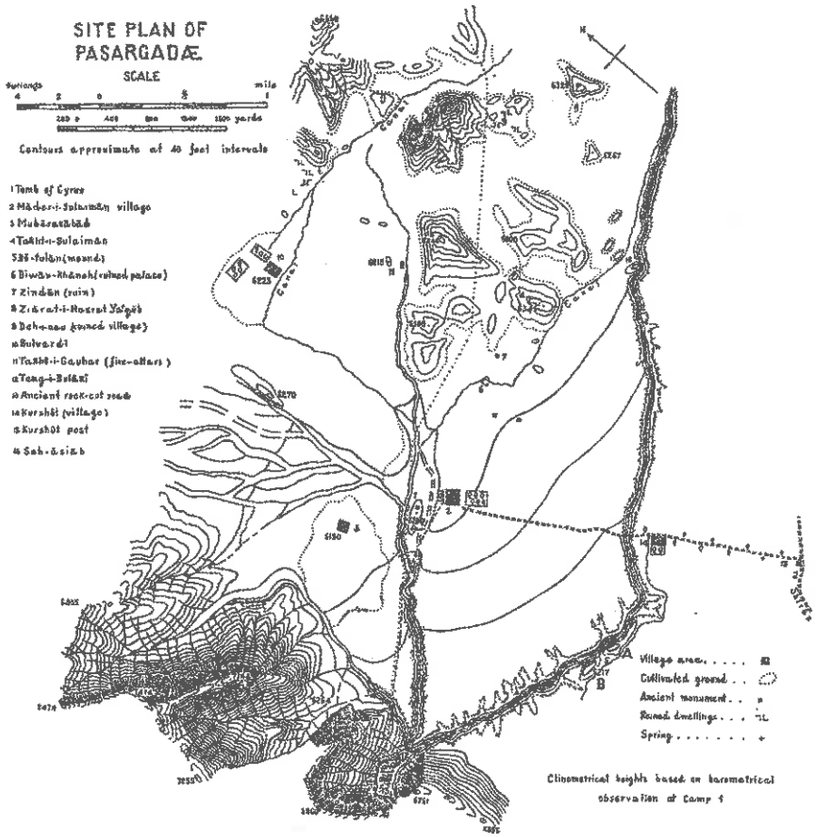
Stein's map (Figure 2.3) complemented Herzfeld's, which showed the small valleys, gullies and the contour lines of the hills and mountains (the next accurate map was done by the Parsa-Pasargadae Research Foundation (PPRF) in 1997, long after Stronach's excavations).

Another picture of the site came from the aerial photographs taken in 1935 and 1936 by E.F. Schmidt, the excavator of Persepolis (Schmidt 1940. Pl. 15; 1953, Pls. 3, 4 and 8). These views clearly illustrate the choice of Cyrus for his residence in a flat and fertile area, near the permanent *Polvar* River from which a derivation canal upstream brought water at the surface level. These photos show the state of the site after Herzfeld's limited excavations.

At the eve of the Second World War, Pasargadae was considered as Cyrus' temporary residence. Beyond half a dozen stone monuments, the site was not considered a town: 'Such a plan cannot be called exactly a town. It looks more like the first settlement of nomads, and such in fact was the case' (Herzfeld 1935, pp. 27–8). However another of Herzfeld's premonitory observations also contradicts this latter statement:

> It [the Solomon's Throne] dominates the palace area below, which was enclosed by a park-wall. The uniform orientation of the palaces therein, some lines indicating walls and roads, some traces of canals, show that there was really a park around the buildings, a garden like the 'hanging gardens' which Nebuchadnezzar made in Babylon for his Median consort. (Herzfeld 1935, p. 27)

The Royal garden was recognised by Stronach much later, and a part of the park organisation by our team only at the beginning of the twenty first century.



PLAN 19

Figure 2.3 Map of Pasargadae region produced by Aurel Stein (1936)

Source: Stein 1936: Plan 19

Field Research from the Mid-twentieth Century

Ali Sami's Iranian Expedition, Excavations and Restorations (1949–55)

After the Second World War, the Iranian government committed the Iranian Archaeological Service to resume field research on the famous Achaemenid site of Persepolis which had been excavated by a Chicago expedition led by Schmidt, Herzfeld's successor, in 1934. Meanwhile, the Government urged Iranian archaeologists to undertake excavations at Pasargadae. Ali Sami, the expedition's leader, worked on both sites. In Pasargadae, between 1949 and 1955, he completed Herzfeld's excavations of 1928, clearing out the complete plans of the palaces and Gate R. He found a series of stone watercourses, part of an irrigation system as Herzfeld already suspected. Sami also excavated on the *Tall-i Takht*. His work in the unexplored area to the south of Palace S towards Cyrus' tomb did not reveal any more stone construction. Sami took this opportunity to launch a program of preservation of Pasargadae, which has been registered on the list of Historical monuments of Iran on 18 September 1931. To protect the monuments, he enclosed each within a baked brick wall and levelled the surroundings to prevent the water runoff in this damp area. Sami a summarised his researches in a booklet (Sami 1956) and continued the preservation work.

David Stronach's British Excavations (1961–63) and Subsequent Studies

In a fruitful expedition under the auspices of the British Institute of Persian Studies, David Stronach thoroughly revealed and published the monuments of Pasargadae. The three field seasons carried out between 1961 and 1963 resulted in Stronach' seminal publication in 1978. With this magnificent book lavishly illustrated with plans, drawings, reconstructions and numerous photographs, Pasargadae entered into the history of Iranian and world architecture. Maps and plans of this book have been extensively used and published in further studies and publications.

Sparing the reader a detailed account of the expedition,[5] Stronach's researches took into account each major building as well as the extant remains on the *Tall-Takht* and he demonstrated that the monumental architecture at Pasargadae greatly benefitted from the use of Lydian and Ionian stonemasons while also offering reflections of Assyrian, Elamite and, to some extent, Egyptian arts. The functions of these buildings are still a subject of speculation and require further studies in relation to both the history of architecture and the landscape in which the buildings stand. For example, the two so-called Palaces, S and R, consisting of a single hall

5 Stronach published a dozen papers in the following years mainly about the garden, but also on the Winged Figure carved on a doorjamb of Gate R and on the short cuneiform inscriptions. See references at the end of this chapter and for a recent comprehensive description, see Stronach and Gopnik 2009, available at http://www.iranicaonline.org/articles/pasargadae.

with four and two porticoes respectively, and corner towers, are hardly suitable for a palace. A palace is supposed to be a multi-roomed building for housing the king, his family and his retinue, not to mention administrative offices. Instead, the two columned halls appear to be prestigious buildings for audiences and receptions.

It is highly likely that Cyrus had planned to build his residence on the *Tall-i Takht*, but did not realise this project. To the south, the Gate R area lacks any obvious defence. This impressive building is the official entrance to the Royal residence, quite a new concept in Near Eastern architecture and urbanism, and a prototype for the later Persepolis and Susa palaces. As regards the 12.38 metre-high tower locally called *Zendan-i Solaiman* (Solomon's Prison); long viewed as an isolated construction (7.25 × 7.33 metres), there is no consensus on its function; propositions include tomb, temple or dynastic building sheltering the Royal emblem. There is, nevertheless, consensus regarding the function of Cyrus' tomb as his last resting place and the ascription of a ceremonial dynastic or religious function to the two huge cubic stone plinths (2.10 metres high), located near each other beyond the northwest hill. The most common speculative interpretation is to compare them to the scene carved above the rock-cut Royal tombs at *Naqsh-i Rustam* and Persepolis showing the king standing on a three-stepped platform facing a burning fire on a pillar resting on another stepped platform. The two cubes of Pasargadae are simpler and only one is accessible by a staircase.

The Aftermath of the Excavations: Results and Problems

Stronach with the help of Carl Nylander, a Swedish archaeologist trained in Classical art and architecture, demonstrated that Cyrus carefully planned his prestigious buildings by consciously integrating elements from various parts of the newly founded empire, including a prominent use of Lydian stoneworking techniques.[6] The king wanted to make Pasargadae a mirror of the diversity and wealth of his already World Empire, just as Darius would some decades later at Persepolis.

Another major result was the full discovery of the Royal Garden which would become the prototype of the Persian and Islamic garden in its regular orthogonal plan, rectangles of 145 × 112.50 metres, with a twofold internal division delineated by stone watercourses as discussed below. Stronach revealed another outer, less regular circuit partly surrounding the rectangle and also running on the short sides of Palace P (Figure 2.4). The complete layout of the watercourses was finally cleared out in 1971 to prepare the site for the *Celebrations for the 2500th Anniversary of Persian Kingship*. The featured garden covers some four hectares.

6 The most obvious non-Persian components Nylander (1970) evidenced are from Greek and Lydian origin, therefore postdating the conquest of the Lydian kingdom of Croesus, around 545 BCE, and the Ionian cities of the Asia Minor coast. Their work is obvious from the quarry to the stone cutting techniques and decoration of the palace columns.

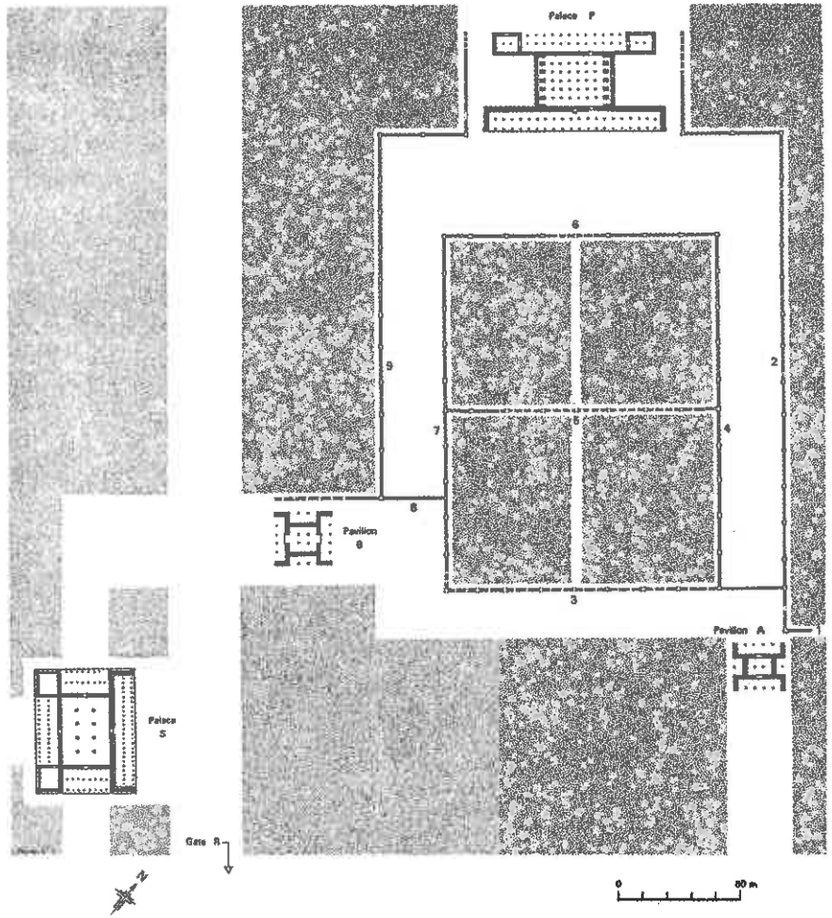


Figure 2.4 Reconstruction drawing of Pasargadae gardens by Stronach

Source: Courtesy of D. Stronach 1989, Figure 2

After he published his seminal book, Stronach suggested that another channel might have been running Northwest-Southeast in the middle of the garden. Finally he replaced it by a path that lead perspectivally to a probable stone throne-seat in the middle of the portico of Palace P where the King sat. Therefore the Royal garden would have been divided into four parts, foreshadowing a *chahar-bagh* ('four-gardens') the characteristic feature of Persian landscapes until the nineteenth century. The Pasargadae garden has been the most famous feature of

the site for the past 50 years. It is reproduced in all handbooks on Iranian and Near Eastern archaeology, as well as in articles, books and magazines on garden history. Stronach's suggestion of a path instead of a north-south channel is the most plausible reconstruction one can offer according to the recent geomagnetic survey in 2001–3, conducted by our team (Figure 2.8).

The perfect, orthogonal layout also appears for the first time in Pasargadae. Xenophon (*Oikonomikos* IV.20) celebrated the regularity of the Persian 'paradise' where he described the Sardis garden as 'finely and evenly planted' and 'exact and arranged in right angles'. The vegetation of the garden is one of the unsolved questions: the trees, plants, flowers and parterres the garden supported.[7] The featuring of the landscape around this garden has recently received some answers, confirming Stronach's assumption of 'a concept of a "garden capital", in which open-sided palaces and other major structures were intended to stand within an area of extensive, complementary gardens … ' (Stronach 1989, p. 483).

Another major question still debated is the fate of Pasargadae after Cyrus (post-530 BCE). Some works have been done in Pasargadae under Darius, for example the completion of the sculptures in Palace P.[8] Darius found *Tall-i Takht* unfinished and instead of a palace he built a defensive mudbrick wall protecting a series of rooms. The degree of Darius' intervention in Pasargadae as he was concurrently building his own residence at Persepolis is also indicated by the short inscriptions engraved in several copies on some pillars in Gate R (disappeared), in Palaces S and P, and on the pleat of some sculptures in the three cuneiform languages of the empire, Old Persian, Elamite and Babylonian. Though they declare 'I, Cyrus the king, an Achaemenian' or 'Cyrus, the great king, an Achaemenian', many scholars think Darius is the author of the inscriptions.[9] While the definitive answer is still

7 Archaeobotanical studies on Pasargadae garden are most desirable albeit rather hard for two reasons. Firstly, due to the geomorphological dynamic of the *Morghab* plain there is only a thin layer of soil which would have covered and protected the archaeological remains of the Achaemenid period and most parts of the site were not actually reoccupied after Alexander. Secondly, in the mid-1940s and again during the first year after the 1979 Revolution the then fenced site was opened for cultivation, despite its registration on the list of the National Heritage. Therefore, modern and ancient layers containing botanical remains were mixed up, as well as the stone water courses which were partly dismantled by mechanical means.

8 This is revealed by the use of the toothed chisel in stone sculpture, an iron tool of Greek origin which was introduced in Fars at the very end of the sixth century BCE, therefore much later than when Cyrus died in 530 BCE.

9 Darius' inscription at *Bisutun* (Behistun) is usually considered the first written expression of the Old Persian language, engraved on the rock after his victory over the usurpation of Gaumata (Greek Smerdis) and his revolt with several petty kings who claimed to be the brother of Cambyses, son of Cyrus, who died in 522 BCE. Therefore the question is to decide whether Pasargadae inscriptions antedate this major text or they were engraved in Pasargadae by Darius, from another branch of the family, after 522 BCE as a political attempt to legitimise his own usurpation.

pending, it is clear that nothing important took place in Pasargadae within the first two decades of Darius' reign. Pasargadae was then a small but active town and certainly famous for containing Cyrus's tomb.

Following the British excavations and the publication of its results, a renewed interest in Pasargadae appeared which contributed to its preservation. The Italian restoration team (directed by Giuseppe and Ann Britt Tilia) which had been at work at Persepolis since 1964 for the Iranian Ministry for Culture, was requested to undertake preservation, consolidation and some restoration at Pasargadae. Their intervention concerned the tower '*Zendan*' and Palace S. Around the *Zendan* a huge iron scaffolding was erected against the only remaining façade in order to prevent its possible collapse (Figure 2.5).

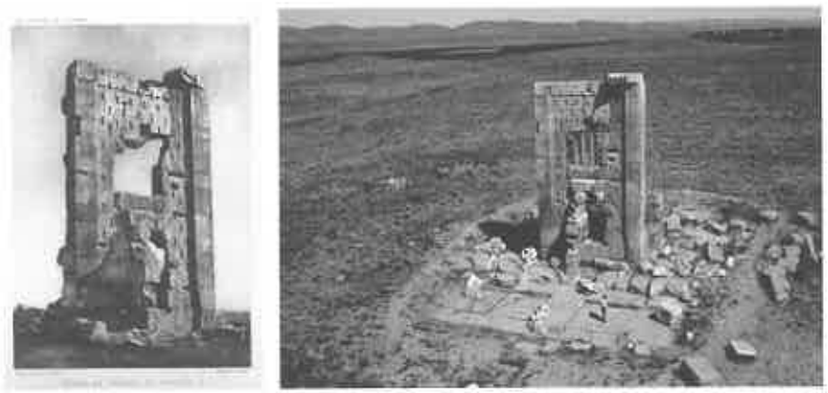


Figure 2.5 Left: *Zendan-i Solaiman* as recorded by Dieulafoy in 1881; Right: the structure in 2002

Sources: (left) Dieulafoy 1884: Pl. V; and (right) © French-Iranian Archaeological Mission to Pasargadae, photograph by B.N. Chagny, 2003

In relation to Palace P, some less-positive actions included the return of some of the columns of this building from other locations to their original position in this palace in preparation for the 1970 grandiose *Celebrations of Persian Kingship*, a project that was designed to restore Pasargadae to its 'original', pre-Islamic condition.[10] The Italian team were directed 'by order of the Archaeological Department' (Tilia 1972, p. 67) to remove the column drums set around Cyrus's

10 The main ceremonies took place in Persepolis with a worldwide invitation to the political leaders of dozens of countries. But Pasargadae was the place of a more Iranian-restricted ceremony where the Shah paid homage to Cyrus at his tomb and swore to maintain his Heritage.

tomb when it was transformed into a mosque in the Middle Ages and to bring them back to Palace P, their original location a decision from the authorities of the day. In practice, most of them were only left lying beside the palace because their original location could not be precisely determined. As a result, part of the history of the site has disappeared. Furthermore, to facilitate a more comfortable traffic movement on the site, some paths were covered with asphalt thus obfuscating the vision of the 'Royal garden' (Figure 2.6).

Figure 2.6 Aerial view of the Royal Gardens with Palace P in the background

Source: © French-Iranian Archaeological Mission to Pasargadae, photograph by B.N. Chagny, 2003

Pasargadae at the Turn of the Twenty First Century: The Site in Its Environment

Non Destructive Fieldwork on the Site: Exploring the Morghab Plain and the Bolaghi Valley

Funding and time restrictions constricted the breadth of the fieldwork carried out by the British archaeological team, limiting the study to the visible stone buildings and to excavation of the mudbrick constructions on the *Tall-i Takht* platform. As a result,

Pasargadae continued to be perceived as a sparsely occupied site.[11] The idea of a Royal campsite, which was sometimes suggested in several previous descriptions of the site (Herzfeld 1935, p. 28), was clearly expressed by the great art historian and archaeologist, Henri Frankfort (1954, p. 36), and even several years after the British excavations (Hansman 1972, p. 110). This view is still widespread: Cyrus spent most of his life away from Fars, while expanding his empire, and was seldom in Pasargadae; therefore he would have been content with a sort of camp-capital during his stays. Consequently he would have only erected some prestige stone monuments that readily employed foreign techniques and artistic features to symbolise his power and the expanse of his empire. For some authors, the hypothesis of a camp instead of a town would be reinforced by the absence of fortifications, though Herzfeld had suggested a rampart on the southern side near Gate R. Stronach has often asserted that the campsite hypothesis is wrong, but at the same time one must note that his widely-spread map of the site (Figure 2.7) is so 'empty' with only a few scattered stone buildings, that one can hardly imagine a real city. Stronach (1989, pp. 481–2) has also suggested that besides the 'Royal Garden' other surfaces might have been landscaped gardens, a hypothesis which is now confirmed.

In 1999, in a fortunate coincidence, the Iranian Cultural Heritage Handicrafts and Tourism Organization (ICHHTO)[12] was given the project to present Pasargadae to the World Heritage list of UNESCO, while some archaeologists were eager to explore the site with new available methods and techniques. Therefore the aim of the new fieldwork was in two complementary fields, heritage and archaeology: to better explore the huge 'empty' areas between the stone constructions, to look for the limits of the archaeological site proper, and to extend the survey to the neighbourhood. The heritage goal was to better define the site and to protect it, the archaeological and historical aim was to offer some answers about the 'city' of Pasargadae.

To establish the form and extent of the city, various archaeological survey methods were employed: topographical survey, geophysical survey, mainly by the magnetic and sometimes the electrical method, and aerial photographs taken by plane or taken at low altitude from a kite and balloon offering vertical or oblique views at different periods of the year and times of the day. To better understand the functioning of Pasargadae, the survey of the plain and neighbouring valleys aimed to situate the site within its territory and ascertain the land use of the whole plain.

During six short field seasons (1999–2008) the Franco-Iranian team of archaeologists and geophysicists, efficiently supported by the PPRF, implemented

11 The interest for the natural environment of a site and the landscape managed by human occupation is a rather recent trend amongst archaeologists. In Stronach's time (the 1960s), it should be remembered, the various remote sensing methods, and even the now-commonplace aerial photography, were still in their infancy. Topographical devices for levelling a site were not so fast as the modern computer-aided equipment at every archaeologist's disposal.

12 At the time, the organisation was known as the Iranian Cultural Heritage and Tourism Organisation (ICHTO).

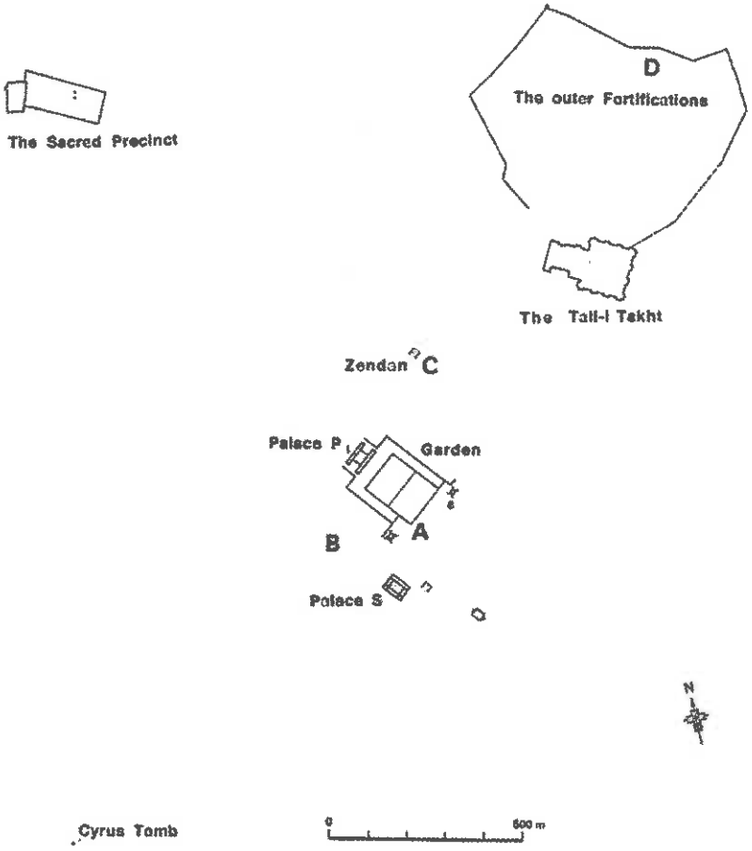


Figure 2.7 Plan of Pasargadae monuments by Stronach in 1961–63

Source: courtesy of D. Stronach 1978, Figure 4

these surface survey methods.[13] Topographically, a very gentle SE-NW slope, not visible on the map of the site provided by the PPRF's Pasargadae Base (contour lines at 5 metres only) was confirmed. It definitively demonstrated that the origin of water for irrigating the Royal garden and providing water for the whole site

13 The team also included a surveyor in charge of the topography and a photographer in charge of the photos from balloon and kite. The French team was supported by an annual/yearly grant from the French Ministry for Foreign Affairs. It is noteworthy that with the reactivation of PPRF in 2002, under the directorship of Dr. M.H. Talebian and the staff at both the Persepolis and Pasargadae offices, the work was much more efficient.

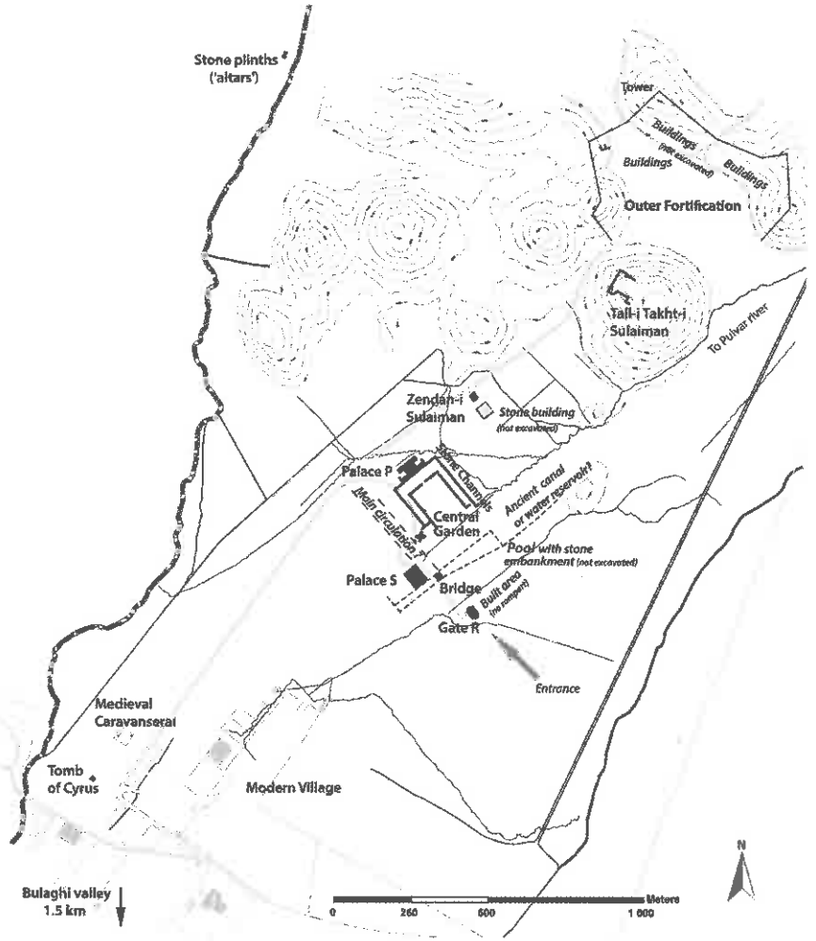


Figure 2.8 The plan of the buildings in Pasargadae, as known from the British excavations in the 1960s and from the geomagnetic survey in the 2000s

Source: © French-Iranian Archaeological Mission to Pasargadae 2012

should be the canal, a derivation of the *Polvar* River two kilometres upstream and flowing to the site along the southern slope of the *Tall-i Takht* then to the southwest to the bridge. The ancient riverbed is visible in the southern part of the site marked

by a shallow depression. Minor canals brought water to the Royal garden and probably to other parts of the site.

The geomagnetic survey covered several areas, totalling 45 out of the 300 hectares of the protected archaeological site (Figure 2.8). The main results were (see Boucharlat and Benech 2002a and b; Benech, *et al.* 2012):

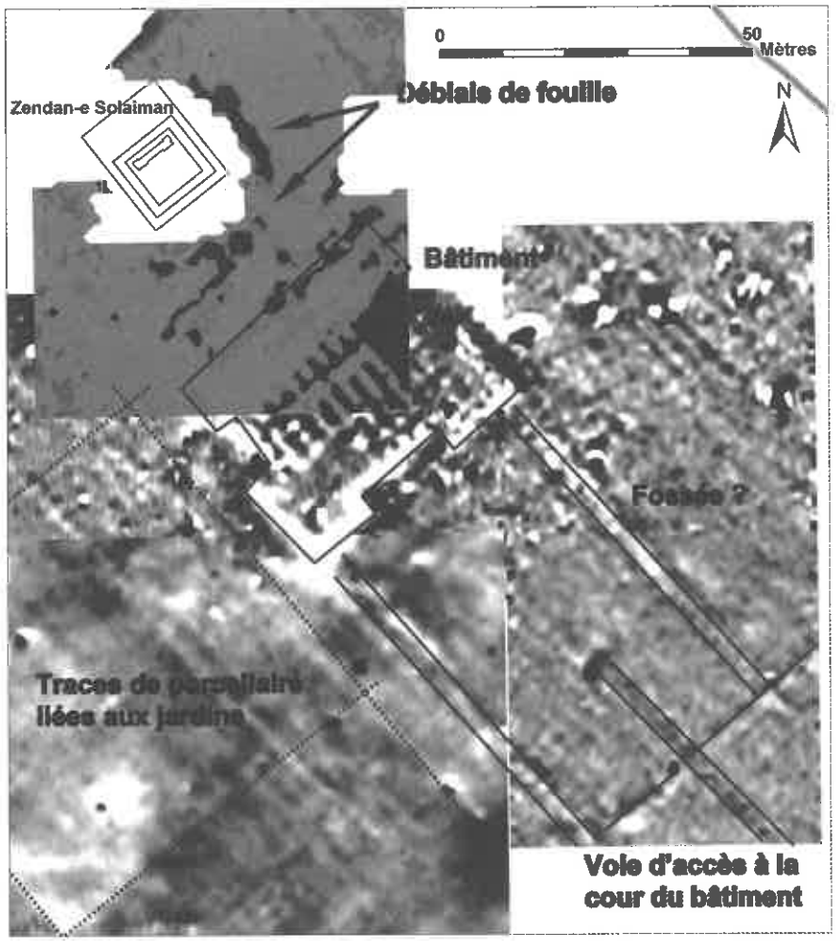


Figure 2.9 Detail of electromagnetic survey of the site in 2002 showing stone building with buttresses behind the *Zendan* as revealed by the geomagnetic and electrical maps. This building is linked to a rectangular enclosure to the south

Source: © French-Iranian Archaeological Mission to Pasargadae, map by C. Benech 2012

- The discovery of a new building on the flat part of the site, such as a rectangular stone construction ca. 40 × 30 metres only a few meters behind the tower *Zendan-i Solaiman* (Figure 2.9). We now know that the latter was not an isolated tower, but was associated with another structure and set within a rectangular enclosure.
- The identification of the supposed riverbed as a trapezoid pool with a stone-built embankment (Figure 2.10). Upstream, to the northeast of the bridge, the pool is 200 metres long and 60 metres wide at a maximum to its northeast limit. Its depth was 1.5 metres, according to an electrical survey test. This pool is reduced to a 26 metre-wide canal after the bridge along Palace S and then it turns to the northwest as a narrow canal. Looking at the geomagnetic image one can guess a dotted line at the end of the pool; one suggestion is that they may be a series of sluice gates for maintaining a constant water level in the pool. The section of canal following the southern corner of Palace S remains undetermined.

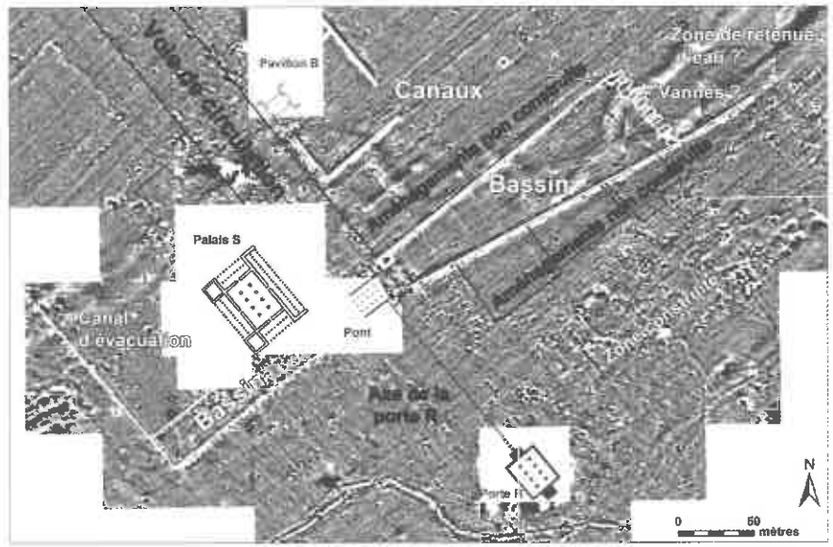


Figure 2.10 The trapezoid pool with sluices gates at the two ends for regulating the water flow. A large canal continues to the west along Palace S, then turns right as a narrow channel. Top of the map shows a part of the channels of the fourfold garden

Source: © French-Iranian Archaeological Mission to Pasargadae, map by C. Benech and S. Gondet, 2012

- The drawing of a network of parallel and perpendicular alignments east, south and west of the Royal garden at several dozens of metres one to the other. Though it is difficult to determine whether these lines correspond to paths, ditches or fences (or all of these features), this network is the best evidence of the landscaping of that major part of the site. One of the clearest alignments of interest is a new North-South axis, starting from Gate R, passing through the bridge (which width should be probably twice wider than the excavated part according to the geomagnetic image), then continuing along Palace S to the northwest as a dotted line (Figure 2.10). Interestingly this axis may well be the main one in the 'park' while the North-South axis reconstructed in the Royal garden would be that of the garden itself. Without excavation, this remains a speculation.
- The absence of a rampart, certainly to the south of the canal, where a series of magnetic anomalies bespeaks of several constructions or more modest features has been confirmed.
- As a direct consequence of the latter observation, the canal is repositioned, in all likelihood, within the park, probably in its middle, rather than the southern limit of the site. This broadens the landscaped area to some 100 hectares, up to 500 metres southwest-northeast and running from Cyrus' tomb to the foot of the *Takht,* two kilometres in a direct line to the northeast.
- The revelation of a densely built area inside the amphitheatre defined by the 'outer fortification' beyond the *Tall-i Takht* which was left unexplored by the previous excavations.[14] These constructions are present on the slopes and in the lower flat area. Interestingly, the buildings on the eastern slope are large rectangles, 30–40 metres long, with a series of small rooms around a large central open space. The plan of the constructions in the flat area of this amphitheatre is less clear but some of them seem to be large. Without excavations, it is impossible to determine the function of these structures. Given their size and their regular organisation, they are hardly common houses sheltering a family. They were the results of a decision from the authority. Whether they were planned for garrison quarters or storehouses or some other function remains undetermined. Because of the poor state of preservation, sometimes only tiny stone alignments just resting on the natural rocky surface, it is not certain any excavation would be rewarding in this respect.

Concerning the environment of the site which was very likely managed for supporting the new city of Pasargadae, the joint team aimed at surveying the *Morghab* plain and the *Bolaghi* gorge and valley through which the *Polvar* River flows; the narrow gorge opens two kilometres south of Cyrus' tomb, then after six

14 Stronach conducted a small test-pit at the junction of two sections of the 3.40 metres-thick wall, revealing the mud-brick foundations of a rectangular tower measuring 6.5×7.5 metres (Stronach 1978, p. 159).

kilometres broadens into a small 9×3 kilometres valley. Downstream, at the end, a narrow passage links this valley to the *Shahidabad* plain and downstream to the Persepolis plain, 40 kilometres away from Pasargadae in a direct line. The survey results concerning the Achaemenid period in the *Bolaghi* valley are summarized below with the important achievements of the international project of salvage excavations conducted in 2004–7 in that area.

In the *Morghab* plain, the joint team surveyed the hills and the slopes of the small mountains nearby looking at the possible settlements and other anthropic installations. The archaeological survey shows little trace of ancient settlements. If some have ever existed in the plain and on the foothills, they have probably been destroyed or hidden by the land use of the plain which started in the second half of the twentieth century. However several sections of canals have been observed running through the foothills North of Pasargadae following the contour lines; these sections were later surveyed by a joint Iran-Japan team (Tsuneki and Zeidi 2008). On the top of hills, only badly preserved cairn burials have been recorded. They are shaped into small heaps of stones collected around and piled up to preserve an inner space just large enough for the decomposition of a dead person left on the natural ground. Such practice does not require digging the rocky ground while it prevents the intrusion of beasts and prey birds. In absence of any artefacts, these cairns are undated. One can only guess that some were used in the Achaemenid period since there is no other evidence of cemeteries around Pasargadae. The absence of a necropolis linked with the city is still a puzzling issue.[15]

Sivand Dam Salvage Project (2004–7)

The study of the Pasargadae surroundings received a strong impetus from 2004 to 2007 thanks to the Archaeological Sivand Dam Project. As Abdollahzadeh and Shamoradi discuss in this volume, this new dam has been under construction since 1992 at the very end of the *Bolaghi* valley for storing water for the irrigation of the plains downstream. The ICHHTO decided to launch an international Archaeological project on the whole valley and the *Bolaghi* plain in order to record all archaeological remains and excavate the most important ones. Several joint teams were assembled at short notice (from France, Germany, Italy, Japan and Poland) and worked for two or three seasons. The results concern four major periods of human occupation, fifth–fourth millennium BCE, Achaemenid period which is of interest for the focus of this chapter, Sasanian-Early Islamic period and finally Modern period including nomadic campsites, mainly Qashqai tribes, which used the valley during their seasonal transhumance routes between *sardsir* ('cold territory' in altitude for Summer sojourn) and *garmsir* ('warm territory' in the plains for Winter sojourn).

15 Two cairns-burials excavated in the Bolaghi Valley by the British expedition provide chronological clues. In one of them a ceramic pilgrim flask could be dated of the Parthian period, in the second century BCE (Stronach 1978, p. 167).

For the Achaemenid period, the results were most important in relation to Pasargadae. For the first time, it became possible to illustrate the functioning of an Achaemenid centre supported by its environment. On the Royal level, a small multi-roomed pavilion with two opposite porticoes with carefully carved square stone bases was cleared out in the gorge, representing a rest or a hunting pavilion. Downstream, in the broader valley, one village or hamlet and two farms of that period have been excavated.[16] One can speculate they represent the built parts of one or several 'paradises', a very distinctive institution and landscape of the Achaemenid period which is reported with admiration by the Greek authors. A 'paradise' (Old Persian *paridaiza*, Elamite probably *partetash* or *irmatam*, Greek *paradeisos*, Hebrew *pardes*, later *pardis* in Persian, *ferdaws* in Arabic) defines a selected piece of land, generally speaking an estate established by the king, a satrap near his capital, or a noble, serving not only as a pleasant garden, and/or orchard, crops and fields, but also other things such as animal reserve and zoo. Apart from the testimonies of the Classical Western authors, there is mention of such estates in the Persepolis Fortification Tablets, written in Elamite language. They are receipts or journals, recording goods (mainly cereals, beer, wine) distributed from Persepolis administration for providing food for the local workers, or to prepare the Royal visits or to be stored in the road stations for travellers sent to other cities of Fars or distant provinces (members of the Royal family, nobles, soldiers, groups of workers). Often, the goods arriving at Persepolis come from various estates of the province, or are exchanged between such estates for regulating crops and husbandry production in Fars. The *Bolaghi* valley may well have been such an area of agricultural products under control of the local governor under the Royal organisation (Boucharlat 2011).

Understanding Water Management Devices and the Nature of Ancient Settlement in Pasargadae

Latest archaeological excavations and surveys have furthered our understanding of the Achaemenid water management devices and strengthened the case for the interpretation of Pasargadae as a permanent city in that period.

The Pasargadae region has good climatic conditions. The average annual rainfall is over 350 millimetres, making dry farming possible, despite significant annual variations, the temperature is cold in winter and reasonably hot in summer. Given the mountain ranges encircling the region, water is abundant in Spring due to snowmelt, sometimes provoking flash floods. In summary, water is not lacking but needs management.

Recent studies in Pasargadae area have demonstrated how Cyrus undertook important hydraulic works when creating his residence. The derivation canal from the *Polvar* River has been mentioned. It provided water for the park and

16 For a summary of the results gained by the various teams who took part in the Sivand Dam Salvage project, see Boucharlat and Fazeli 2009.

the city at the ground level, while the river flowing two kilometres to the south is deeply incised. Herzfeld, Stein and Stronach have recorded sections of rock-cut passageways on both sides of the gorge in *Tang-i Bolaghi*. However, despite certain recent suggestions (e.g. Tsuneki 2008), the hypothesis of a Royal road for the rock-cut passage on the right bank should be abandoned (Stronach 1978, pp. 166–7). Even the widest part of the passage (1.5–2 metres) is too narrow to be used by people and their horses. The most probable function of these passages on both sides of the gorge is a water canal. The narrow width (less than 1 metre in several parts of the left side canal), their very gentle slope (1 to 3 per thousand), and the links which were observed between the rock-cut sections and sections of stone and earth built embankment show a continuous line. Moreover, this embankment, which once supported the canal itself, equally shows an intentional height and layout to keep it almost horizontal, generally following the contour lines in the broadened parts of the valley. These two canals, surveyed as 10 kilometres and 17 kilometres long respectively, evidence an important investment for providing a permanent water resource in the *Bolaghi* valley.

North of Pasargadae, the survey has also demonstrated the hydraulic investment of the Achaemenid period. The *Polvar* River and some of its tributaries are crossed by several dams and weirs. They obviously aimed at regulating the water flow, particularly in spring. Two examples highlight the technical degree of these features. About 20 kilometres in a straight line from Pasargadae, two dams are built on the *Polvar* River (De Schacht *et al.* 2012). Upstream, a 500 metre-long and 12 metre-high embankment is made of earth reinforced by rough stones. Near the top, a 12 metre-long device is made of ashlar masonry with huge blocks over 1.50 metres long, carefully dressed and perfectly joined together and attached by iron clamps set into lead (Figure 2.11). These technical characteristics are exactly the same as in the Palaces of Pasargadae. The device is not yet completely understood despite the limited rescue excavations carried out in 2008 and 2009; excavations that were launched due to the damages inflicted by treasure-hunters in recent years.[17] The 20 metre-long structure is composed of a main conduit 5 metres long, 1.4 metres high, and 1 metre wide, a perpendicular small chamber distributed the water flow into six narrow channels 6 metres long (Figures 2.12 and 2.13). Downstream, these channels can be closed by a vertical sluice gate before reaching the outlet in a basin. The basin is also made of ashlar masonry and its rear side is left open. Then the water flowed freely on a gentle slope. The second dam is located two kilometres downstream, in that case, and the stone device at the bottom of a very high embankment. It shows the same organisation: a large conduit, then six small channels equipped with sluice gates and a rectangular basin.

17 The first damages were first observed in 2004 by the joint Franco-Iranian team. The following year traces of mechanical shovel were visible around the structure. Finally, during the excavations, wires for dynamite were brought to light. This 'discovery' demanded the quick intervention of the army's specialised unit from Shiraz!

Figure 2.11 The ashlar masonry water device 20km north of Pasargadae set on the top of a dam/dike (visible on the right photo top). This sophisticated dam and another one nearby aimed at regulating the water flow of the *Polvar* River

Source: © French-Iranian Archaeological Mission to Pasargadae 2008

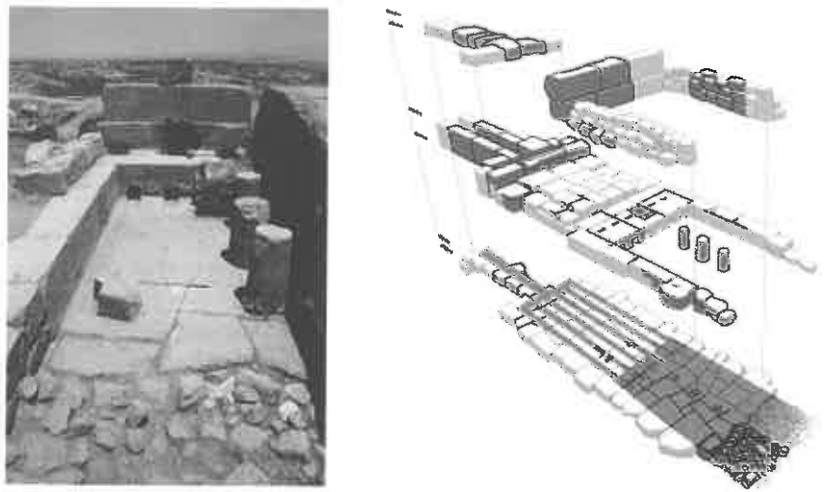


Figure 2.12 Side view and exploded axonometric of water control device in Shahidabad

Source: © French-Iranian Archaeological Mission to Pasargadae, photo and axonometric view by T. De Schacht and Y. Ubelmann, 2009

Figure 2.13 Detail of the water canals in ashlar masonry, as perfectly cut and joined as its contemporary Royal architecture in Pasargadae

Source: © French-Iranian Archaeological Mission to Pasargadae 2008

This kind of water investment does not aim at providing water for irrigation, but rather to control the water flow. The reservoir of the lower dam has been estimated between 250,000 and 8,000,000 cubic metres (when the reservoir was full). Therefore these dams could have regulated the snowmelt in spring and stored water for the summer and autumn when the water levels in rivers fall.

Stone mason techniques, confirmed by radiocarbon dating prove that these dams belong to the early Achaemenid period. They are astonishing evidence of the land(scape) management and infrastructure Cyrus undertook for his new residence which therefore cannot be a transient nomadic campsite.

Tomorrow: The Site and Its Associated Hinterland in the Heartland of the Achaemenid Empire

The registration of Pasargadae on the World Heritage list includes the site, its immediate surroundings and a buffer zone. After the identification of the site as the

resting place of Cyrus, a century of archaeological work has transformed the picture of this famous grave. Then, the excavations and in-depth study of the monuments during the second half of the twentieth century illustrated the high quality of the art and architecture of the early Achaemenid period. Recent fieldwork has thrown further light on the landscape totally transformed by Cyrus when he decided to create his residence as a 'paradise'. It also stressed the importance of water for the Achaemenids evidencing channels and a large pool in the middle of the park. Significantly, recent research has revealed the huge investment Cyrus made in the surroundings up to 20 kilometres around in a previously depopulated plain for supporting the town and supplying water to it and to his residence.

This broadened vision of Pasargadae as sustained by its environment demands the whole region to be taken into consideration by researchers and site managers alike.

Though the Achaemenid period is the most important one on that site, the whole chronological array of the human occupation (from prehistory to present) should also be taken into consideration to produce a coherent picture of this place. The study of the present day population's daily life is important since the reputation of this historical site and the tourism activity it instigates, have a strong impact on the expansion of the Pasargadae (*Madar-i Solaiman*) village itself and other adjacent villages. Many villagers took part in the British excavations and some others work as guards and workers or took part in the recent research. Today, *Madar-i Solaiman*, which is usually called Pasargadae on the maps and locally on the road signs, is closely dependant on the site's activity which welcomes thousands of Iranian and foreign visitors every year.

What can archaeologists and historians contribute to the future of Pasargadae? A program has already commenced by the PPRF that will encompass the whole region characterising it as a cultural landscape beyond the archaeological site.

For the present day protected area, fieldwork requires a continuous program for better preserving and presenting the already visible monuments. This is in the hands of specialists of the PPRF and ICHHTO with the desirable help of UNESCO experts. In my opinion, large-scale excavations are neither an urgent need nor a useful operation. Certainly the site deserves more archaeological research. Excavating a whole monument is possible and desirable when it aims to present it to visitors. However the complete archaeological investigation of a whole site would be an endless and useless project if not conducted with precise aims. In the case of the Pasargadae area (several square kilometres) there are a series of goals:

1. To complete the archaeological and architectural information. ICOMOS encourages dynamic of research on the UNESCO listed sites and strongly recommends non-intrusive (destructive) methods in order to maintain the site's state as close as possible to the time when it was registered. In this respect, excavations should be limited and restricted to testpits/soundings, constituting a few other methods including remote sensing methods, geophysical surveys, levelling microtopography. Such investigations would concern several spots:
   - a re-examination of the *Tall-i Takht* architectural layers and stratigraphy, to give a better understanding of the Achaemenid and post-Achaemenid occupation which the 1960s British excavations could not have provided,[18]
   - restricted test pits on the recently discovered building behind the tower *Zendan-i Solaiman* to establish the type of construction (very likely stone masonry, probably ashlar masonry according to the geomagnetic survey) and its elevation. Beyond such results, this operation reveals some clues for understanding the function of this enigmatic tower,
   - similar test pits on the embankment of the pool would reveal pieces of information for reconstructing Cyrus' landscape project.
2. To underline the primary importance of the garden and park in Pasargadae. This huge landscaped area (some 100 hectares) surrounding the very regular central garden represents the best known and very likely the earliest example of Persian 'paradise'. For stressing its double importance let's mention the title of two articles written by Stronach apropos Pasargadae: *The Garden as a Political Statement* (1990) and *Parterres and Stone Watercourses at Pasargadae: Notes on the Achaemenid Contributions to the Evolution of Garden Designs* (1994). The former emphasises the role of the large and well-organised garden as a symbol of the Royal power, definitely as important as the stone architecture. The latter puts Pasargadae garden and park as an ancestor of the Oriental and then Islamic garden throughout the Middle East and around the Mediterranean Sea. Another article (Stronach 1989) had previously shown how Pasargadae garden is both the heir of a Near Eastern tradition while it completely transformed the previous Assyrian models. Definitely Pasargadae is a benchmark for the garden in the world cultural history. As such, it deserves more investigation.

   Again, as for the garden, another important piece of information concerns the ancient vegetation, plants and trees, contained in Cyrus' paradise. In such parks, the king or a satrap used to have local vegetation, including fruits and edible products, as well as exotic plants and trees imported from various parts of the empire. This symbol of luxury is often mentioned in the Classical sources for other Achaemenid paradises, such as Cyrus the Younger's paradise in Sardis, as Socrates reported (Xenophon Œconomicus IV.18) or Dascylium paradise (Xenophon Hellenica IV.1.15–17). Plants can be identified by archaeobotanical, palynological, perhaps anthracological research. In Pasargadae, defining suitable places for sampling is not an easy task because the topsoil covering the ancient ground is thin (some

18 Two testpit excavations conducted by a joint Iran-Italy team in 2007 and 2008 short seasons have resulted in a better knowledge of the artefacts of the main period of occupation and the later ones. See Askari Chaverdi and Callieri 2010.

tens of centimetres) and has been deeply disturbed, particularly due to the ploughing within the core region of the site which began some 15 years before the British excavations started and which was re-authorised for a short period in 1979.[19] Until now our attempts for finding pristine areas have been unsuccessful. However there is still hope in finding such areas with intact layers for instance in the canal bed where the deposits are thicker and probably not disturbed.[20] Besides vegetation remains, animal bone could be retrieved too. The presence of domestic and wild animals is also mentioned in such parks.

3. Implementing new geophysical surveys for the whole site would certainly be rewarding. Some parts were left explored by the geomagnetic method, especially between the Palaces area and the tomb of Cyrus. Given the surface, it could be covered with traction engine. As a complement a DEM (Digital Elevation Model) would allow the reconstruction of the complete 3D micro topography of the site: the very feeble variations of the topography, not visible to the naked eye, would be informative of the location of non-built dugout ditches conducting water or any kind of limits made of perishable material (for example wood, reed, small mud-brick walls).
4. To contribute to the protection of the site in a broader sense. Such investigations will have some consequences for the areas under cultivation beyond the fenced area: a project for surveying these fields by remote sensing methods and geophysical surveys should be built soon for locating then protecting the possible remains still buried. For such a study the electromagnetic survey method ('wide mesh net' measured point for 10 square metres) could be implemented revealing at least the areas where some human activities took place.
5. To extend the survey to the *Morghab* plain and beyond. The area to be taken into consideration extends over 20 kilometres north of Pasargadae (to the *Shahidabad* and *Didegan* dams area) and to the same distance to the South to the very end of *Bolaghi* valley. Eastern and Western parts of the *Morghab* plain remain poorly explored and this may be of some importance for understanding the function of the Achaemenid settlement beyond the limits of the inhabited area (for its quarries, other canals, and the like) but also for its subsequent history.

The registration of Pasargadae in the World Heritage list constitutes both a constraint for the archaeological activities, presentation and development of

19 The sad consequences of these agricultural activities are visible on the stone watercourses: many blocks have been displaced or show ploughshare traces. Moreover the cleaning of the watercourses tends to remove the earth matrix alongside them.

20 Several kilos of soil for each sample should be analysed for giving a chance to retrieve grains or pollens.

the site and its region and an opportunity to organise them within a series of clearly defined projects. For building and conducting these projects specialists of various fields should be called for collaboration. This includes archaeologists, historians, art historians, museologists, anthropologists, economists, engineers and agriculture experts. Pasargadae offers a nice opportunity to consider not a single major monument, as it was often the case in the previously UNESCO listed places, but a whole site considered within in its environment including several present day villages or towns around Pasargadae. This present, local population should not suffer from this situation but should of course benefit from the dynamism created by the worldwide cultural importance of Pasargadae.

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